AMENDMENTS TO THE DRAWINGS

The attached one sheet of drawings includes the following changes:

In Fig. 1, the proposed Figure 5, submitted with the Amendment Under 37 C.F.R. § 1.111 of June 10, 2005, has been combined with the replacement Figure 1 submitted with that Amendment.

Attachment: One (1) Replacement Sheet containing Fig. 1.

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REMARKS

The Office Action of July 26, 2005 has been received and its contents carefully considered.

Claims 1, 7 to 21 and 23 are all the claims pending in the application, prior to the present Amendment.

The Examiner states that she is re-establishing the objection to the specification and withdrawing the previous indication of the allowance of the claims. The Examiner states that the claims are being rejected over the prior art submitted by applicants in the Information Disclosure Statement filed on June 10, 2005.

The Examiner objects to the drawings.

In particular, the Examiner continues to object to Figure 1. The Examiner has withdrawn the objection to Figure 4.

In Paragraph 10 of the Office Action, the Examiner states that the Figure 5 that applicants proposed reflects the changes that the Examiner believes are necessary for Figure 1. The Examiner states that she would rather see Figure 5 incorporated into Figure 1, rather than have the separate Figure 5.

In response, applicants enclose herewith a new replacement Figure 1 which incorporates the proposed Fig. 5, as suggested by the Examiner. Applicants have also amended the specification to describe the new Fig. 1.

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The Examiner objects to the specification as containing subject matter which is not clear. The Examiner raises a number of reasons why the Examiner believes the specification is not clear. Many of these reasons are the same that she has previously advanced.

With respect to the various reasons set forth in the second full paragraph of Paragraph 4 of the Office Action, it appeared to undersigned counsel that these reasons related to the embodiment of the invention where ammonia gas is withdrawn from the measurement sample cylinder 9. The present claims, however, are not directed to such an embodiment, but are directed to the embodiment where liquefied ammonia is withdrawn from the measurement sample cylinder 9. The Examiner has not rejected the present claims as being based on a non-enabling disclosure, but only objects to the specification. Accordingly, it appeared to undersigned counsel that the Examiner was asking applicants to revise the specification so that it is directed only to the embodiment where liquefied ammonia is withdrawn from the measurement sample cylinder.

Since it was not entirely clear to undersigned counsel what the Examiner was saying, and it was not clear as to exactly how she wishes applicants to amend the specification, undersigned counsel called the Examiner and asked for clarification.

Undersigned counsel had a lengthy telephone conference with the Examiner, and now has a better understanding of the Examiner's position.

In general, the Examiner confirmed that her objections to the specification are based on the fact that the specification continues to describe the embodiment in which ammonia gas is withdrawn from the sample cylinder 9. Since this embodiment is no longer claimed, the Examiner wants the specification amended to delete this embodiment.

The MPEP, at § 1302.01, authorizes the Examiner to require an applicant to amend the specification to restrict the specification to be in harmony with the allowed claims.

Accordingly, applicants have amended the specification to address the points raised by the Examiner.

During the conversation, the Examiner suggested that dependent claims 7 and 8 be amended in a manner similar to claim 1 with respect to identifying the ammonia. Applicants have so amended claims 7 and 8.

With respect to canceled claim 4, the Examiner stated that she did not have any objection to this claim. Accordingly, applicants have added this claim as new claim 26. Further, undersigned counsel believes the Examiner may not have any objection to canceled claim 2. Accordingly, applicants have added this claim as new claim 25.

With respect to the remaining reasons for the rejection in Paragraph 4, applicants point out that claim 1 refers to measuring the IR spectrum of the reference gas as a background of an IR spectrometer, and measuring the IR spectrum of the sample employing the background of the

spectrometer. One of ordinary skill would understand that the subtraction that the Examiner has referred to would occur.

In view of the above, applicants request withdrawal of the objection to the specification.

Claims 1, 7-10, 13, 15-16 and 23 have been rejected under 35 U.S.C. § 103(a) as obvious over JP '988 in view of WO '265, JP '004 or JP '980.

Each of these references were cited in the Office Action from the Japanese Patent Office and were submitted to the Examiner with the Information Disclosure Statement of June 10, 2005.

Applicants submit that these documents do not disclose or render obvious the subject matter of the present claims and, accordingly, request withdrawal of this rejection.

JP '988 teaches a method for measuring water content in ammonia gas, where a gas to be measured and a pure NH_3 gas without impurities are supplied into a measurement cell and into a reference cell, respectively, at the same flow rate and under the same pressure, and the amount of water as impurity contained in the measurement cell is determined by a difference in absorption between the two.

On the other hand, as described in the present specification at page 3, lines 19-22, it is difficult to simply and conveniently prepare high-purity ammonia which has a decreased water content and can be used as the reference gas in measurement using IR.

However, the inventors of the present invention have found out that the gaseous phase in a tank which is filled with liquefied ammonia whose water concentration is 10 ppm or less is useful as a reference gas. JP '988 does not disclose or suggest this feature.

Further, the present invention has improved measurement errors by using a single cell, which serves both as a cell for background measurement using a reference gas and as a cell for measurement using a gas to be measured. In contrast, JP '988 employs both a reference cell and a measurement cell, and does not disclose or suggest the use of a single cell as in the present invention. The Examiner does not address this issue at all.

Moreover, JP '988 does not include any description about a method for obtaining or preparing pure NH_3 gas without impurities which is used as a reference gas Therefore, the invention could not have been anticipated or suggested by JP '988.

The Examiner relies on the secondary references of WO '265, JP '004 and JP '980 for teaching that high-purity ammonia gas with little impurities can be obtained by sampling a gas phase from a retained liquefied ammonia. Although WO '265, JP '004 and JP '980 teach that high-purity ammonia gas with little impurities can be obtained by sampling a gas phase from retained liquefied ammonia, these references are not concerned with a method for measuring water concentration in ammonia, but are only concerned with a method for obtaining purified ammonia. Accordingly, applicants submit that one of ordinary skill in the art would not have any reason to combine the teachings of these references with JP '988.

In particular, the WO '265, JP '004 and JP '980 documents relate to a preparation method of ultrahigh-purity ammonia where ammonia vapor is extracted from a liquid ammonia tank, the vapor was filtered through a precise filter, and the vapor thus filtered is washed with high pH purified water to thereby prepare the ultrahigh-purity ammonia.

The documents teach that oxides, carbonates and hydrides of alkali metals and alkali earth metals, halides and hydrides of transition metals, hydrocarbons having a high boiling point, non-volatile impurities and impurities having a high boiling point can be removed in the method.

Further, the documents neither teach removal of water nor include any description about a measurement using IR where a gaseous phase in a tank which is filled with liquefied ammonia whose water concentration is 10 ppm or less is used as a reference gas, which is a main technical feature of the present invention.

In view of the above, applicants submit that the cited documents do not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

Claim 14 has been rejected under 35 U.S.C. § 103(a) as obvious over JP '988 in view of WO '265, JP '004, JP '980 and further in view of Muromura.

Since claim 14 is a dependent claim, applicants submit that it is patentable for the same reasons that claim 1 is patentable.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE
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Date: October 26, 2005

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Taizou ITOU, et al.

Appln. No.: 09/732,712

Confirmation No.: 2910

Filed: December 11, 2000

Docket No: Q57601

Group Art Unit: 1743

Examiner: Yelena G. GAKH

For: METHOD FOR MEASURING WATER CONCENTRATION IN AMMONIA

SUBMISSION OF DRAWINGS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find 1 sheet(s) of drawings in compliance with 37 C.F.R. § 1.84. The Examiner is respectfully requested to acknowledge receipt of these drawings.

Respectfully submitted,

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